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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

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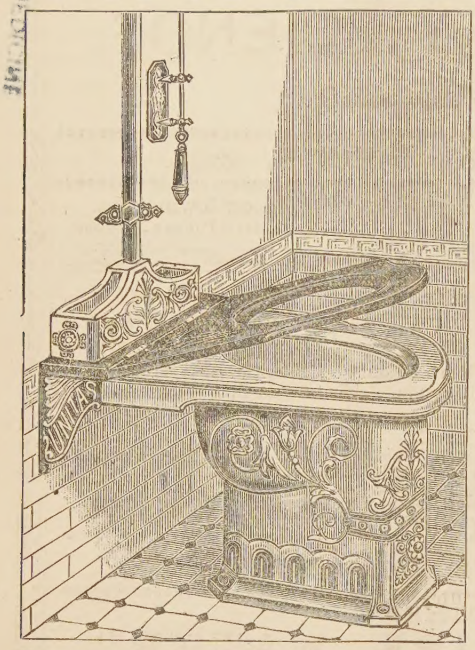

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✦ HEALTH ✦

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, NOVEMBER* 18, 1887.

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Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

IN connection with recent reports regarding the spread of "Leprosy," it may be well to remark that some time ago a medical contemporary reported a case of leprosy which was believed to have been contracted through vaccination. A physician living in the tropics vaccinated his own son with matter obtained from a native child in whose family leprosy existed. At the time the matter was taken the child gave no evidence of being affected with the disease, although subsequently it manifested itself in him. A third child was vaccinated by the physician with virus taken from his own son. Subsequently the son developed leprosy in a mild form; but the child who was vaccinated with matter taken from him had the disease in a most severe form, and died from it. The physician's son is now attending school in England, but eminent physicians have given the opinion that there is no danger that the other students will contract the disease.

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THE Report of the Leprosy Committee of the Royal College of Physicians of London has just been published. This report says:—"The Committee appointed by the College to consider the communication from the Colonial Office on the subject of leprosy, having given the questions contained in that communication the most careful consideration, now submit their report to the College. The Committee are quite aware that there is much difference of opinion respecting the communicability of leprosy, and that many colonial practitioners and inhabitants do not concur in the views expressed by the College in their report in 1867. The Committee are of opinion that if there be any elements of contagion in leprosy, they are not more to be dreaded than are those in the case of syphilis, which is not commonly considered to justify compulsory segregation on the part of those affected.

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"THE Committee believe that leprosy is not contagious in the conventional sense of the term, but if at all, is only so in low degrees, and under exceptional circumstances. The Committee are of opinion that a further investigation into some of the more recondite points respecting the pathology of the disease would confirm or remove any doubt that may still remain as to the question of communicability, and they therefore recommend that the Government should institute such an investigation as this College might direct, and report on to the Government when completed.

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"WHILE the Committee do not believe compulsory segregation to be justifiable, the encouragement of leper asylums or houses properly regulated they consider most desirable, such asylums not to be regarded as prisons, and so arranged as not to prove foci for intensifying the disease, but as refuges where kindness, care, and enjoyment or the simple though necessary conditions of a healthy life would be insured. In this direction the Committee strongly recommend State interference and assistance." The publication of this report should tend to remove any feelings of alarm with which the idea of the possible spread of leprosy may be viewed by the public. In a future issue, I shall give an account of leprosy as an ordinary disease.

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WITH reference to the subject of hats and baldness, discussed some time ago in HEALTH, Dr. Austin Flint, of New York, writes as follows respecting the views of his father on this subject. Dr. Austin Flint, senior, nearly thirty-five years ago, wrote, in the *Buffalo Medical Journal*, March, 1853, No. 10, page 651, an article entitled "Hats and Baldness."

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THE most characteristic trait of the hat is the tightness with which it encircles the head. Herein consists, in our opinion, its agency in the loss of hair. The stove-pipe hat must needs encircle the head tightly, in order to be secure in its position in spite of wind and other

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disturbing forces. To appreciate the degree of compression, one has only to note the indentation on the forehead after a tightly-fitting hat has been worn for some time. Everybody knows how commonly this is to be observed. The head is, in fact, pretty firmly compressed while the hat is worn.

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Now, what must be the effect of this on the circulation? Plainly, the effect is to interrupt the circulation in the scalp above the circle on which the compression is made. It is precisely like tying a cord around the head sufficiently to diminish, if not stop, for the time, the flow of blood through the temporal and other arteries by which the blood is distributed to the superior portion of the scalp. The hair-follicles, as is well known, are very vascular. Their functions require this vascularity, and an adequate, constant supply of oxygenated blood. If this supply be diminished, the growth and nutrition of the hairs are proportionally affected; and, finally, the *pulp* enclosed in the follicle withers and dies, as does any other part when deprived of the *pabulum vitæ*. This effect occurs on the crown, because interruption of the circulation in arteries is always felt most in the parts to which the terminal branches are distributed.

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SUCH is our explanation of the fact that baldness is so frequently observed in the young and middle-aged men of the present generation. The remedy is to repudiate the present fashion of hats. Let some inventive genius devise a substitute for the unseemly, as well as hair-destructive, article which is now the *mode*, and we are firmly convinced that *toupées* will become objects of curiosity rather than utility, and the bald pate will again be venerated as the distinguishing trait of old age.

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DR. D. M. WILLIAMS writes to a medical contemporary as follows regarding the cure of paroxysmal sneezing: "If Mr. E. Crickmay will, with the aid of a camel-hair pencil, apply a small quantity of 'Thylum' or 'Hippacea' to the irritable spot in the nostril, his patient will be almost instantly relieved, and the relief lasts for days.

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"IN the case of a gentleman who caught a severe cold, with violent sneezing, which could only be relieved by squeezing the nostril, pressing on one spot firmly, one application of 'Thylum' gave immediate relief, which lasted six days, when a second application became needful. Still, this gentleman has not yet recovered from a severe attack of post-nasal catarrh. I only claim for Omum its power to relieve pain quickly and pleasantly, with no unpleasant tingling of skin, as is experienced after aconite."

Original Essays

"Life is not to live, but to be well."—*Martial.*

WHAT IS LEPROSY?

BY DR. ANDREW WILSON.

PUBLIC attention has of late been prominently directed to the nature of leprosy from the report that a case of this disease—if, indeed, not more than one case—had been imported into England. The Royal College of Physicians of London has also issued a report on the subject of leprosy and its spread, and a newspaper correspondence has also opened up the question of the increase of the disease.

It seems, therefore, desirable that some accurate details regarding this always terrible ailment should be supplied to our readers, if for no other reason than that the public mind may be reassured on several crucial points connected with the nature and distribution of the disease.

The word "leprosy" is derived from the Greek for "rough," and there seems no reason to doubt that the name was indiscriminately applied at first to all skin-disorders in which a roughness of the skin-surface was a notable feature. In the Bible, the name is thus used indefinitely. It is therein applied to diseases of simple and grave character alike. The "leper" of old in many cases, was simply a person affected with an ordinary skin ailment. The Greek physicians, contrariwise, designated leprosy by the name *Elephantiasis;* a term in its turn which is not to be confounded with the same word applied to denote a local disease marked by greatly increased growth of the parts it attacks. In fact, *Elephantiasis Græcorum* was true leprosy, just as *Elephantiasis Arabum*, or "Barbadoes Leg," is the less important disorder last referred to. In Jewish language, true leprosy was called *Isaraäth;* in Scotland the *Myckle Ail* (or Great Evil); while it has also been named *Eastern Leprosy* and *Black and White Leprosy.*

As regards its distribution in space, leprosy occurs in India, China, the Eastern Archipelago, Madagascar, Polynesia, the West Indies, and certain parts of South America. In Great Britain it was once well known. The old "leper-houses" were evidences of this fact, and for thirteen hundred years it was known to exist in our midst. At the beginning of the present century, the late Sir Erasmus Wilson tells us, the last case lingered on the borders of Scotland. It is happily extinct in our midst to-day as a native ailment. Norway, Sweden, and parts of Canada are also to be included in the area of the distribution of this disease. In Norway the census of 1864 gave the number of lepers at 2,182. In Greece it is said to be also a stable and permanent disease; while in Spain and Portugal the poorer classes show an alarming percentage of cases.

Concerning the causes of leprosy, Sir E. Wilson says they are of *endemic* character—that is to say, these causes are resident in, and are proper to, certain

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localities. He adds that the disease has been met with from time immemorial in certain districts, but that the causes of the ailment must be such as thrive and persist equally in warm and in cold latitudes. It is a notable fact that leprosy has disappeared from our midst in Britain contemporaneously with improved drainage and with the development of health conditions at large. Sir Erasmus Wilson had it forcibly borne in upon him that the cause of leprosy is a *miasma*, or a condition associated with swamps, morasses, dampness, and decaying vegetable matter, similar, in short, to the circumstances which are known to engender ague and malarious fevers at large. One of his cases was that of a distinguished Australian, who had been engaged in extensive draining operations in New Zealand, and who "had lived for several years amidst the exhalations of the freshly-opened soil of the marshes." He adds that "the example is not solitary." An English lad, born and brought up on the verge of a marsh in the West Indies, developed the disease. His father, a few years later, followed him home, similarly affected. Doubtless a poor or inadequate dietary, bad air, and overcrowding may increase the tendency to the disease, but that it has a more specific cause than these generalized conditions appears to be very evident.

It remains to be noted that some observers have discovered a *bacillus* or germ in the diseased tissues which they regard as the probable cause of the ailment. Dr. Klein says of these germs that they are fine rods, pointed at the ends and occurring in masses, some being active in movement and others not. Inoculation of domestic animals and monkeys with these bacilli has failed to reproduce leprosy.

Leprosy, it should be noted, is not an infectious disease in the sense in which, say, scarlet fever or typhus fever is so named. It is held that it is not "contagious," and cannot be conveyed from a patient to a sound person. This fact should tend to reassure the public regarding an important point in the history of the ailment, although, as we shall presently note, observers differ regarding this matter. That it is *hereditary*, and may be handed down from an infected parent to his children, is, however, a well-established fact. It may skip a generation, like other diseases; and it may, of course, appear in cases where no hereditary influences are traceable. At the Bergen Hospital it has been noted that leprosy is more frequent on the mother's than on the father's side; and we learn also, from the same source, that it descends more frequently in side or collateral branches than in the direct line. Some observers tell us that males are more frequently affected than females; but the evidence on this head is confessedly incomplete. The lowest orders of society are those in which leprosy is most frequently seen; a fact testifying to the influence which unhealthy surroundings may possess in extending or perpetuating the ailment.

Writing on the subject of "The Spread of Leprosy" in the *British Medical Journal*, under date October 28th, 1887, Dr. John D. Hillis, of Dublin, late Medical Superintendent of the British Guiana Leper Asylum, says that "In the West Indies there is a widespread belief in this mode (vaccination) of propagation, and both white and coloured classes are particular to have their children vaccinated only with lymph imported from England. In my work on Leprosy ("Leprosy in British Guiana," J. & A. Churchill, 1881, p. 30) I have recorded a Case of Confirmed Tuberculated Leprosy supposed to have been Contracted by Vaccination. I used the word "supposed," although I had no doubt on the subject myself, and the late Surgeon-General Monget was also acquainted with the case. At page 208, referring to this, I state, "I have already given some cases in which there could be no reasonable doubt but that the disease was produced by vaccination with tainted lymph, and we have testimony in favour of this mode of propagation from such men as Tilbury Fox and Erasmus Wilson." Then follows a similar one taken from Dr. Piffard's work on 'Diseases of the Skin.'"

"I take great interest," adds Dr. Hillis, "in the subject of the spread of leprosy, and it was with much satisfaction I learned on my arrival home that the Royal College of Physicians of London were inclined to re-open the subject so fully dealt with in their report of 1867. Since that date more light has been thrown on the pathology of the disease, and a mass of valuable information collected. It is also known that many medical men differ from the College in the opinion then expressed with regard to the contagiousness of leprosy, so that I would plead for a rehearing of the matter in order that our knowledge of the disease may be brought up to date, and a responsible decision given. From all parts of the world we have intelligence of the increase of leprosy. Is the cause of this satisfactorily accounted for on any other hypothesis than that of contact of the unhealthy with the healthy? I have had more than twenty years' experience of the disease, one half of this time as superintendent of the largest leper asylum in the West Indies, and my opinion is that leprosy, in some manner we are as yet unacquainted with, is thus communicated, and that whenever lepers are allowed to congregate, and no attempt made at isolation, other cases will in due course assuredly arise, irrespective of hereditary tendency, peculiarity of diet, locality, &c.

"I will conclude with the following facts that came under my own observation. A shopkeeper at Demerara, whose business as contractor for provisions took him frequently to the asylum, became leprous. For at least ten years his wife remained free from any sign of leprosy. The case was well known, and I had been frequently called on to explain with reference to this very person how, if leprosy was in any way contagious, this man's wife escaped so long. In May, 1886, this woman came to me with well-marked symptoms of leprosy, and was under treatment when I left the West Indies.

Docteur Pierre's

(Member of the Faculty of Medicine, Paris)

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"Such cases, at any rate, prove that one or two years do not suffice to thoroughly study such a disease as leprosy; but if they could be kept sufficiently long under observation, I am satisfied some startling facts would be brought to light."

As regards the above statements, one might repeat Dr. Hillis' own words that the question of the contagiousness of leprosy is still *sub judice*, and that it is one which will require very careful examination ere the views held to-day regarding its non-infectious character can be overthrown. If leprosy be on the increase in this country, it may be taken for granted that it does not spread by the passage of the disease from those who are affected to those who are hale and sound. Again, increased means of travel and of intercommunication with other countries must play their part in increasing the number of cases which may be found within the limits of Great Britain. Leprosy may, at present, be viewed as imported disorder—imported from places and centres where, as we have seen, it is "endemic" in character.

No panic need be raised regarding the discovery of cases of leprosy amongst us if the above facts be borne in mind. And if we take into account the fact that with improved general health among the people—an advance dependent on the presence of good drainage, pure air, pure water, pure food, and healthy surroundings—we shall have additional cause to regard without fear the apparent increase of the disease. This development of the ailment is not likely to prove a real increase in the true sense of that term, but more probably implies imputation of cases from endemic causes.

HOSPITAL NURSES.

BY A NURSING SISTER.

In Health for Oct. 21st a few remarks were made about the proper age at which the duties of a hospital nurse should be first undertaken, and the conclusion was strongly against allowing young girls to enter this profession. Indeed, it is obvious that a hospital nurse must see many things of which a girl should be ignorant, and must do much work only suitable to those of mature age. As a rule, a woman is not accepted to commence her training in this profession till she has passed her twenty-fifth year, and those institutions which take all-comers, irrespective of age, are none of them good schools in which to learn nursing.

Of course, if a woman has her living to make, it is very tiresome to let many of her best years go by, especially as a nurse can never expect good wages once she shows the slightest signs of age. But then few people are foolish enough to suppose that there is any chance of gaining fame or fortune by nursing, and their object is generally the good of others, without much thought of self. There is a marvellous fascination about nursing for most women. It is work which is acknowledged as essentially feminine, and yet it calls forth all the greatest and noblest qualities of the human mind. A good nurse soon becomes so engrossed in her interesting labours that she takes all disagreeable duties as a matter of course, and in common conversation naturally never refers to the many unpleasant details she has to attend to. Thus it comes about that through blind admiration for some nurse who came like an angel of light into a house where sickness was, or through the sentimental stories which infest magazines for the young, some wilful girl insists upon leaving her home duties and becoming a hospital nurse.

In the advertised list of contents of a magazine for this month is, "Employment for Girls—Sick Nursing." Now sick-nursing is most emphatically *not* employment for girls who are tired of flirting, and want to pose in a pretty cap and apron: it is work for women, and only as such must it be taken up and attempted. Any young girl entering a hospital, sacrifices for ever two of her most precious possessions, youth and innocence: she will never come forth from the ordeal the same. She may come forth better, but, at the same time, the freshness and bloom will have gone from her character; the knowledge gained of sin and suffering can never be forgotten; the apple has been eaten; this world is a paradise no more.

These objections cannot be too strongly urged against allowing hospital nursing to be undertaken by the young; but if a girl has lost all common sense and is utterly bent on having her own way, it is better to let her go and be miserable in a hospital than to stay at home and make others unhappy by her ill-temper. Choose a large hospital where the nurses work from twelve to fourteen hours a day, and have all the cleaning of the wards to do, and enter your wilful damsel there. Permit no dangling after "sisterhoods" where church services halve the day with nursing duties, and pay no attention to preference shown for children's hospitals or convalescent homes. If a girl will be a nurse, let her know she must be a thorough one; for the work is the grandest and noblest given to women to do, and those who bring to it only half-hearted wishes, or genteel dilettantism, are contemptible in the extreme. Probably, a girl who was too selfish to submit to the wishes of those over her, will learn a severe lesson together with the duties of a nurse. Like the boy who runs away to sea, she will most likely return home after a time penitent and patient, and with a remarkable relish for the simplest luxuries of life.

On the other hand, if a sensible girl has a decided gift for nursing, and a longing to seriously enter the profession, it can easily be shown to her that any years spent in waiting till she reach a suitable age can be usefully employed in training herself in many ways. She will then be a help instead of a hindrance when she enters the hospital; will save herself from falling into many awkward situations; and ensure a much more rapid rise to the coveted posts of "sister" and "matron." No knowledge ever comes amiss in hospital life. A little Latin is very useful in interpreting prescriptions; modern languages are often in request when poor foreigners are brought in as patients. A good voice can cheer a whole ward by a pretty song when work is over; and the artistic eye will see how to group the flowers and decorations sent by sympathizers, so that every corner is brightened. No talent need be allowed to rust because its owner means to be a nurse, and it is only an accomplished and capable woman who ever reaches the high ideal to which all nurses should strive.

Besides carefully cultivating her natural gifts, a girl should study all the books on nursing she can lay her hands on; especially those written by matrons of long experience. She should also read some elementary text-books on physiology and anatomy, and, if possible, attend the course of lectures given by the St. John's Ambulance Association. A strip of linen and a good-natured friend will secure practice in bandaging, and a few hints on plain cooking should be picked up in the kitchen. Let it be remembered that a "sister" or "staff-nurse" has much of the work of a head of a house to do, and that a girl who has been used to helping her mother with the

house-keeping, and aiding in all the small duties of every day, has learnt much that will prove useful to her in the hospital. There, if she rises to a responsible post, it will be her duty to see that the whole ward is thoroughly and methodically cleaned; that the proper cloth is used to polish the tins, so that no time is lost; that the sheets are counted out and aired with regularity, and that order and punctuality reign everywhere.

If only the young would-be nurse could comprehend one-half of what will be demanded of her when she has her wish, there would be none of the eager rushing into dangerous and responsible posts, before either brain or body are developed enough to bear the strain laid upon them. Better far to wait patiently, and take such an important step as entering a hospital as a nurse only after long consideration and earnest thought. And perhaps the best way to learn the lesson of that waiting is to become the servant of all those with whom you come in contact; fetch, and carry, and perform every small duty for the comfort of others that can be divined; for nursing the sick is essentially the practising of all the unselfishness of which the most devoted woman is capable.

Edinburgh Award at Adelaide Exhibition.—Messrs. Thomas Symington & Co., Beaverbank Works, Edinburgh, have been awarded a First Order of Merit Diploma and Medal at the Adelaide Exhibition for the excellence of their "Edinburgh" Coffee Essences.

The Lord Mayor's Banquet.—The new "Clamond" Incandescent Gas Lights were used to light up the entrance of the Guildhall Library at the Lord Mayor's Banquet. Each gave a forty-candle-power light on a consumption of six feet of gas per hour. The Æolus Waterspray Co., 124, High Holborn, London, are the sole agents, and the above was the first installation of the light in England.

Parke's Museum.—The Rt. Hon. the Earl of Meath gave the opening lecture of the forthcoming winter session at the Parke's Museum, Margaret-street, Regent-street, W., on Thursday, Nov. 17th, at 5 p.m. His lordship chose for his subject "The Importance of Open Spaces." The winter programme of lectures is unusually full, and bids fair to be most attractive. Amongst the lectures which are likely to be of special interest to our readers we notice one by the Chairman on "Smoke and Fog"; by Dr. Frank Payne on "Plagues, Ancient and Modern"; by Prof. E. M. Crookshank on "The Germ Theory"; and one by Mr. A. S. Murray on "The Physical Training of the Greeks and Romans."

True Charity.—We have received from Mr. John James Jones, the Director of the London Samaritan Society, 98, High-street, Homerton, London, E., an account of their work, and copies of the tickets they issue. Their system is simply admirable, and this winter all the really charitable should aid a society whose aims are so thoroughly practical. You pay a certain sum to the society, and in return receive a certain number of tickets; these tickets will enable any poor man in the streets to obtain a pint of cocoa or coffee and one pennyworth of bread, or 112 lbs. of the best coals, or 56 lbs. of the same, a 4-lb. or 2-lb. loaf of the best bread, or a sixpenny or a fourpenny night's lodging. These tickets are available in any part of the metropolis, by which means the charitably disposed can dispense their own bounty. Copies of these tickets, with full particulars, will be sent, post free, to anyone taking an interest in the destitute poor.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

VITAL TRUTHS IN DIETETICS.

The most important truths are oft-times clad in plainest garb, and some of the most practical points in the physiology of digestion appear clearly upon a very little subjective study. There are three great classes of foods—viz., albumens, carbo-hydrates, and fats. These three foods must, of course, be digested in the mouth, or stomach, or intestines, or in all. Let us see how digestion is performed in the case of all three classes of foods.

While eating there is a free flow of saliva, and before a child is very many years old it finds that the longer it chews food made from cereals the sweeter the food becomes. Obviously, it might be inferred, then, that the saliva acts upon cereals; and as gluten and meat do not become sweet, it must be the starch in the food that is changed by the saliva into sugar.

Has the stomach also the power to digest starches and sugars? If sugar or oil either be taken alone into the stomach it is apt to excite headache, nausea, and sometimes even vomiting. Such is not the case with meat, gluten, &c. A little reasoning, therefore, suggests that it is the function of the stomach to digest, not starch or fats, but albumens.

We find, therefore, that the saliva digests starchy food and the stomach meat, casein, gluten, fibrin, &c. But where are the oils digested? If not in the mouth or stomach, necessarily in the intestine, as also is the starchy food left undigested by the saliva, and all the albumens unchanged by the stomach (gastric) juice.

We will push the lesson a little further, for we have not considered the liver and pancreas.

The largest gland in the body is the liver, whose functions of old were shrouded in "Erebus and blackest night." Everybody knows it secretes the bile. When one is passing a bile-stone the bile-duct becomes stopped up, and no bile can enter the intestine. What is the result? The excreta become white, contain one-half of the oil taken, and the person is troubled with flatulence. This flatulence shows that either the bile exerts some kind of antiseptic influence, or that it helps to digest the meat or sugar, or both, which ferment when the bile is withheld. From the changed colour, the latter explanation seems most logical.

Every gourmet knows of the abdominal sweet-bread, scientifically called the "pancreas." What is it for? Its duct conveys its secretion into the intestine; and when from any cause this duct is occluded or impassible, the excreta contain one-half of the oil ingested, some of the meat, and some of the starchy food. Thus do we perceive its action. When both the bile and pancreatic duct are closed, all the fat eaten is passed practically unchanged. *All this knowledge is invaluable to the dyspeptic*, and we may add a point or two more. After all the food has been digested, the sugars and meats are drawn into the blood by osmosis and pass to the liver, while the fats are absorbed into the lymphatics (by the villi), and carried off to the blood another way. Plainly then it must be a function of the liver to deal with the albumens and sugars. Such it surely is.

Disturb any one of all the functions mentioned, and the result is obvious. What is the commonest cause of dyspepsia? Decayed teeth answer this question—bolting the food! For what are decayed teeth but evidence

of too little usage? The very first step toward fermentative dyspepsia is bolting the food or imperfect mastication, and the very best means of correcting such dyspepsia is to masticate the food well.

If there are wasting and debility, the saliva will generally be weak, but the dyspeptic has a ready help at hand in the shape of vegetable diastase. A little Kepler Malt Extract, for example, will digest starch efficiently, and afford much nutriment besides. This malt does not ferment like glucose, dextrose, &c., and is a capital preparation for those with delicate stomachs. It removes the dangers attendant upon the administration of gruels in disease, and, being demulcent, is the blandest and choicest means of correcting constipation in dyspeptics. Many cases of intestinal dyspepsia must be attributed to starch, and a good malt extract taken with or immediately after meals, is the natural corrective.

THE NILE AS A WINTER RESORT.

FROM an interesting article, by Mr. W. Smith Brown, published in *Harper's Magazine* for November, we quote the following passages, descriptive of the Nile as a winter resort:—

Five years ago the Nile was the region of my latest winter-experience in health-seeking, and I will therefore begin my commentaries where in our schooldays history began—in the land of the Pyramids. It is a stereotyped expression with regard to all climatic resorts that "the season is exceptional;" but that January, February, and March of the year 1882 were colder and more windy than those months usually are on the Nile I cannot doubt. Unfortunate as the season may have been for the generality of invalids, it was to me the best average of winter weather I have ever known, and I say this after a trip in a dahabeeyah from Cairo to Wady Halfah, in Nubia, near the second cataract, and return, covering a period of about eighty days.

I am, however, forced to believe that, so far as climate alone is concerned, the average winter weather on the Nile from November to April is as good as any to be found for a majority of those who need a mild, dry atmosphere, free from malaria—an element which must be carefully considered by all in search of warm winters. As the Nile Valley is seldom more than ten miles wide between the deserts—and its average is much less—there must be a purity of atmosphere therein that is exceptional. It is cool and bracing, and necessarily very dry—too dry, in fact, for some invalids. On the Nile, above Cairo, but not including Cairo, fires are unnecessary during the winter days. Cotton, tobacco, beans, and other plants very sensitive to cold continue to grow and blossom in this season, and yet the heat is neither oppressive nor debilitating, and woollen clothing can be worn nearly all the time. The nights, however are cool and frequently cold, and the variations from mid-day to midnight, or rather to the early morning hours, when the temperature is lowest, are such as to require an amount of care and caution on the part of invalids not always easy nor likely to be exercised.

During the winter named, the thermometer indicated a temperature below 30 degs. Fahrenheit several times, which is very exceptional; but one is liable to encounter a temperature of from 40 degs. to 45 degs. at night any winter. If on a steamer or dahabeeyah, there is no reliable protection against such changes except clothing and bedding, as there might be could one be protected by a close-built house or by fires. As it is, the doors and windows are never tight, and the invalid traveller, therefore, is never safe unless he can be sure of waking at every change to add the needed protection. As there are only two hotels above Cairo where one may stay overnight, and these at Luxor, and not very comfortable either, the difficulty named seems a serious one for the very delicate to guard against.

When colds occur, as they do frequently, there is no doctor to be had above Cairo excepting at Luxor, and no medicaments to be obtained save those you carry with you. As there are no rains during the winter, the soil is kept very dry, and the constant tramping upon it on the paths by men and animals keeps it so dusty at all times that it is difficult to obtain agreeable exercise on shore without inhaling the fine sand and dust from under foot. This discomfort is increased by the sand storms that one can never count on escaping, and which sometimes prevail from one to two days. All winds heavy enough to move the sand so cloud the air with atoms that it is sure to produce discomfort, even if not followed by positive injury to delicate throats and lungs. The dust raised by donkeys and the unavoidable dust of the dirty villages seriously detract from the diversion of the very interesting sight-seeing which invalids rely upon for benefit.

Add to these objections the expensiveness of going to the Nile and the cost of living there, which cannot be estimated at less than ten dollars a day for each person on a dahabeeyah (and there is no other present means of living on the Nile comfortable for invalids), add also the distance to Egypt and the inconvenience of making it, and I believe both invalids and their advisers should consider long and carefully before deciding that the Nile is the best place in winter for those having very delicate or diseased lungs, including all who are threatened with or who have consumption. For those without settled disease, who have been overworked and who need rest; those who are recovering from an enfeebled condition, and free from pulmonary complaint; those who need a change, with repose from the excitement of their ordinary lives—I know of no trip more likely to prove restorative and compensating than one on the Nile.

Personally, as I said, although the season named was exceptionally cold, I found the Nile climate agreeable and beneficial, but the objections named all presented themselves, and marred the comfort and the health of two of our party. The Nile passenger steamers are a great convenience for such as are limited in time and means, and who chiefly require change and rest (and that class can be fairly comfortable on them), but for serious invalids they cannot be recommended.

Of Cairo,* although generally a healthy city in winter, and a place very attractive to visit, I need only say that the resident physicians do not recommend it for consumptives or for persons with pulmonary tendencies. The air is too damp, fogs are not infrequent, and the inhalation of fine street dust is almost unavoidable. The weather is often too cold to be without fires, for which no good provision exists. The new Grand Hotel has grates for fires, but the coal one is obliged to use is poor, and wood fires cannot be had.

Most invalids wintering in Egypt desire to leave it in April, and many are tempted to visit Athens or Constantinople. This is a serious error, as both climates are unfit to visit before May. Sicily and Corfu, or the Riviera of France, are much safer. Corfu is a beautiful island, and one can be comfortable there.

* *January*, 1887.—Recent newspaper statements assert that winter rains on the Nile are now common; that the climate has greatly changed, and seriously affected the health of Cairo. I give the statement as made, without knowledge.

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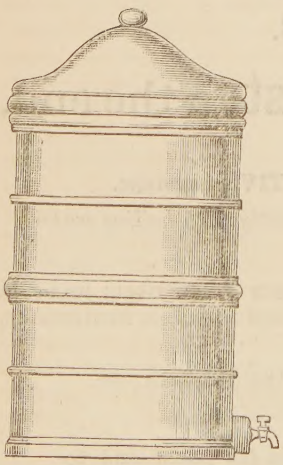

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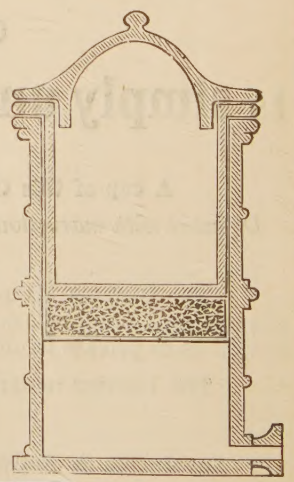

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"In bringing up a child, think of its old age."—*Joubert.*

SOCIAL AND PHYSIOLOGICAL INEQUALITY.

By Henry Dwight Chapin, M.D.

Professor of Children's Diseases in the Woman's Medical College of the New York Infirmary.

SECOND ARTICLE.

3.—*Unequal Moral Development.*—In character, no less than in body and mind, do we see vast differences among men. From the perfect activity of a well-balanced will to the uncertain energy of a vacillating character, there are innumerable variations. Such gradations do not stand in any ratio to intellectual culture. Moral power depends largely upon material environment. It does not flourish with filth or famine. Self-respect, that fundamental necessity for the higher attributes, cannot well exist in rags and dirt. Moral rectitude is with difficulty conserved when the contact of individuals is too close. The excessive overcrowding so often seen in the tenements of great cities is as destructive of virtue as of physical health. I have seen sexual diseases engendered even in childhood, that will not only cripple the development of the individual, but be propagated to future generations. Probably the most prolific cause of vice in densely populated centres is the condition here noted. This is only one aspect of a great subject. It is not necessary to believe that moral nature has been acquired by the slow processes of evolution to appreciate the preponderating influence of heredity in the manifestation of will-power and kindred phenomena. Two individuals may start in life apparently with equal chances and hindrances. One succeeds, the other fails; one is only stimulated by obstacles, the other is disheartened and conquered by them; one has inherent possibilities in his nature that are utterly absent in the other. The mysterious potentialities of different natures are often more easy of recognition than of explanation. There are many peculiar and diverse ways in which the action of the moral nature is exhibited, according to its development, in human affairs. Thus some men display most exemplary conduct in certain relations of family and society, but show an utter absence of the moral sense in dealing with competitors.

There are, unfortunately, at the present time, too many object-lessons exemplifying a strangely irregular moral development. Men who calmly exhibit the greatest depravity in pushing schemes for their own interest, recklessly bribing officials and buying legislators, may yet show apparently the record of a most proper private life. A man who wrecks a bank, thereby spreading distress and ruin wide-spread, is found to be the kindest of fathers. The evil done by forcing a corner in the market that will put some of the necessaries of life beyond the reach of the needy multitude, cannot be compensated for by subscribing to a charity. Railroad-wrecking and dishonest speculation form an incongruous mixture with benevolence. Qualities that are subversive of all civic virtues and tend to the very disintegration of society, appear to flourish by the side of a sort of goodness, finding expression, perhaps, in one or two directions.

The faculty of the mind, as well as the organ of the body, that is used the most, undergoes the highest development and works with preponderating efficiency. If there is an absence of a properly regulated human and moral feeling to hold a check on such excessive keenness the results are unfortunate. The over-development of acquisitiveness and the under-development of certain moral faculties, have enabled individuals to distance competitors and crowd better men to the wall. Some men may have too high a sense of honour to compete successfully with others not so endowed. Doubtless, many of the shiftless and lazy like to consider that they are too honest to succeed. But often this is true of better men. Intense selfishness is too exclusively the mainspring of endeavour in our modern civilization. While the inferior development of physical and mental functions keeps a large proportion of mankind in unequal subjugation to the minority, the under-development of certain parts of the moral nature is actually an aid to worldly success. This is a pregnant thought, and shows how the development theory can throw side-lights on all angles of a social question.

There is, then, a direct relation between an individual's heredity and environment and the complete soundness and efficiency of that individual. In the struggle for existence, where all the conditions for successful and vigorous life have unavoidably been present in poorest degree, it inevitably follows that competition with more vigorous minds and bodies must result in hopeless defeat. Hence the absurdity of most of the ideas advanced for the relief of social wrongs. Appeals are being continually made to Government to remedy this unfortunate state of affairs. But Government cannot help or prevent the operation of natural law. These laws of Nature have been permanently established by the Deity, and no set of men acting temporarily as figure-heads of society can alter their operation. Human life, to be satisfactory, must be conducted according to a knowledge and in conformity with these laws. All that Government can do and should do is to strive to furnish and insist upon the most favourable natural conditions or environment possible for the people—in other words, give them the best chance. Beyond this, nothing can be done by Government. It cannot alter a man's ancestors. The Scriptures, as well as the State, tell us to work out our own salvation.

No altered laws will compensate for defective knowledge or will-power in the regulation of human affairs. A man or a sect with a panacea is always popular. It is disagreeable to face the fact that the causes of most of the ills of life are complex and often difficult of removal. Universal specifics are thus numerous. The statement that people like to be humbugged is as true of social as of physical ills. They shift from one to another of the many quacks who can point to a single and sure road out of all their troubles. Two leading theories have been advanced to reorganize society—socialism and communism. As a sentiment, socialism is in keeping with the highest conception of the relation of man to man; as an organization, it is the enemy of society, since it is not in correlation with the present structure and development of human nature. The underlying sentiment of socialism claims that every man should have a fair opportunity to make a comfortable living and a chance to develop what is best in himself and family. At present this is impossible in many cases. It will continue to be impossible until the weak can be strengthened by more

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favourable environment for a more efficient struggle in life.

Communism recognizes the evils resulting from the fearfully unequal distribution of wealth, and would force a general division. As human nature is now constituted, this is an idle conception. The wealth that is universally distributed and equalized to-day will to-morrow be again in the hands of the few. Legislators cannot prevent this unerring economic law due to fundamental differences in man's development and equipment. Beer-garden philosophers would bring everybody to a level—the lowest level—well exemplified in themselves. In the different strata of society, if men could only be levelled from below up in physical and mental weakness and inefficiency; from above down in unscrupulous sharpness with lacking moral sense, society would be in a condition of more stable equilibrium. No radical alteration in social order will be possible until human nature has slowly been prepared for it by a corresponding alteration. Social reconstruction must be preceded by a reconstruction of man's nature. Has modern society, then, nothing to answer for? Can it calmly point to the inexorable laws of evolution as responsible for social wrongs? Assuredly not. Society must be held in a measure responsible for the crippling environment of so many of its members. The labour that is treated as a pure commodity, to be purchased in the lowest market, will be apt to sink to that level. The manufacturer sees in the excessive division of labour a way to quick profits; hence even pins must be made, from head to point, by different artisans. This plan may produce sharp pins, but it makes dull men, whose children will probably be duller yet.

Trades-unions and labour-organizations sin more in this respect, however, than the greediest capitalists. The leaders, by sternly repressing all efforts of the men to better their condition, by checking all ambition to become skilful, by stopping apprentices from learning trades, and by striving to produce a general level of remuneration, are reducing labourers to the condition of slaves.

CLEANLINESS AND HEALTH.

Dr. R. Thorne Thorne, in opening the session of the Abernethian Society, gave the following most instructive remarks on the above topic :—

Dirt being matter in the wrong place, and nature having allotted to every form of matter its proper place, such matter, it was held, only becomes hurtful to a man in so far as the well-ordered design of nature was interfered with. In elucidation of this principle the speaker entered at some length into the conditions by which the air of our towns and cities became fouled by crowding of houses on area and of persons in houses, the inhabitants inhaling each other's emanations, until typhus fever became a common and fatal disease amongst the destitute classes subjected to these uncleanly circumstances; and then, taking the case of London, he showed how typhus had been practically extirpated as a current endemic fever by the measures that have been adopted during the past twenty years in the demolition of unhealthy property, the opening out of wide streets and other breathing spaces, and the provision of some open space to the front and rear of new dwelling houses.

Liverpool taught the same lesson, but in a somewhat different manner; for whilst the typhus mortality of that city had, on the whole, undergone material diminution, the disease still caused a regular annual mortality, and tended to recur in limited epidemics, which constituted a danger to the kingdom at large. It was then shown by quotations from official and other documents how rife the conditions of uncleanliness with which typhus is especially associated still are in Liverpool. Coming next to the need for cleanliness in such matters as water supply and means for the disposal of the solid and liquid refuse of populations, the state of this country with regard to enteric fever at the present date was compared with that which prevailed before modern sanitary works had been carried out in a comprehensive and intelligent manner, and it was shown how great had been the saving of life from this one preventable continued fever as the result of the expenditure of public money in works of sewerage and water supply which had been voluntarily incurred by the people of this country, and which has cleanliness as its principal aim.

Applying somewhat the same principles to the subject of house drains, the progress in cleanliness of the air of our hospital wards was discussed, and it was shown how, by means of cross-ventilated lobbies between closets and wards, and by means of an air-break between ward and drain, the sick were now no longer subjected to the inhalation of drain emanations. In the conflict with disease which each sick person is engaged in, the need for the utmost procurable cleanliness of air breathed was urged, and it was pointed out how, in modern hospital construction, it was now sought to attain this object. Coming next to details in connexion with attendance on the sick, the great importance of personal cleanliness was insisted on, and instances were given to show the dangers resulting from the handling of food supplies by those having charge of persons sick from infectious and other diseases. Cleanliness was to be aimed at in every detail, and the conditions under which some departments of modern surgery are carried out were instanced as types of that scientific cleanliness which should be observed in all our dealings with the sick.

In conclusion, it was pointed out that nature is remorseless in exacting the penalty of disease and death for any breaches in her laws as to cleanliness; that the innocent suffer with the guilty; that unintentional acts, involving want of cleanliness in points of detail on the part of those devoting their time to the care of their fellows, are as swiftly followed by fatal consequences as is the crass neglect of those who deliberately violate every law of cleanliness by permitting the wholesale accumulation of filth about their dwellings; and that in order to remove such causes of preventable disease, it was above all things necessary to cope with the ignorance that prevailed as to the potency for mischief of dirt in all its forms.

MR. READMAN, B.Sc., F.R.S.E., F.C.S.,
Analytical and Consulting Chemist,
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Chloride of Lime in Laundries.—The Prefect of Police has issued an order prohibiting the use of dry chloride of lime in the Paris public laundries as too dangerous to handle for the unskilful persons working in these establishments. Henceforth only liquid bleaching compounds are to be allowed.

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

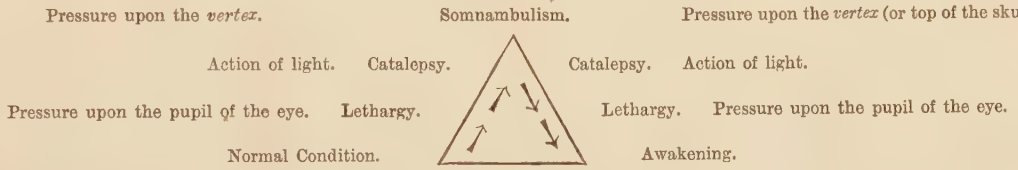
MESMERISM IN FRANCE.

By Max Dessoir.

SECOND AND CONCLUDING PAPER.

The inferences of the Parisian school up to this time are somewhat as follows, but their results, belonging almost entirely to the medical side of the question, can have no place in this discussion. They divide the phenomena of hystero-hypnotism, which they also call *grande hysterie*, into three plainly separable classes, which Charcot designates catalepsy, lethargy, and somnambulism.

Catalepsy is produced by a sudden sharp noise, or by the sight of a brightly gleaming object. It is also produced in a person who is in a state of lethargy, and whose eyes are opened. The most striking characteristic of the cataleptic condition is immobility. The subject retains every position in which he is placed, even if it is an unnatural one, and is only aroused by the action of suggestion, from the rigour of a statue to the half life of an automaton. The face is expressionless, and the eyes wide open. If they are closed, the patient falls into a lethargy.



In this second condition, behind the tightly closed lids, the pupils of the eyes are convulsively turned upward. The body is almost entirely without sensation, or power of thought. Especially characteristic of lethargy is the hyper-excitability of the nerves and muscles (*hyperexcitabilité neuromusculaire*) which manifests itself at the slightest touch of any object. For instance, if the extensor muscles of the arm are lightly touched, the arm stiffens immediately, and is only made flexible again by a hard rubbing of the same muscles. The nerves also react in a similar manner. The irritation of a nerve-trunk not only contracts all the small nerves into which it branches, but also all those muscles through which it runs.

Finally, the somnambulistic condition proceeds from catalepsy or from lethargy by means of a slight pressure upon the *vertex*, and is particularly sensitive to every psychical influence. In some subjects the eyes are open, in others closed. Here, also, a slight irritation produces a certain amount of rigour in the muscle that has been touched, but it does not weaken the antagonistic muscle, as in lethargy, nor does it vanish under the influence of the same excitement that has produced it. In order to put an end to the somnambulistic (or sleep-walking) condition, one must press softly upon the pupil of the eye, upon which the subject becomes lethargic, and is easily roused by breathing upon him. In this early stage, somnambulism appears very infrequently.

Charcot's school also recognize the existence of compound conditions, the history of whose symptoms we must not follow here. These slightly sketched results, as well as a number of other facts, were only obtained in the course of several years; yet in 1882 the fundamental investigations of this school were considered virtually concluded. Then Dumont-Pallier, the head of the Parisian Hospital Pitié, came forward with a number of observations, drawn also exclusively from the study of hystero-hypnotism, and yet differing widely from those reached by the physicians of the Salpêtrière. In a long series of communications, he has given his views, which have in their turn been violently attacked, especially by Magnin and Bérillon. I give only the most important points.

According to these men, the hyper-excitability of the nerves and muscles is present not only in the lethargic condition, but in all three periods; and in order to prove this, we need only apply the suitable remedy, which must be changed for each period and every subject. Slight irritations of the skin prove this most powerfully. A drop of warm water or a ray of sunshine produces contractions of a muscle whose skin-covering they touch.

Dumont-Pallier and Magnin accede to the theory of intermediate stages, and have tried to lay down rules for them with as great exactness as Charcot's school. They also are very decided about the three periods, whose succession does not appear to them as fixed; but they discovered a new fundamental law which regulates the production as well as the cessation of the condition,—*La cause qui fait, défait;* that is, the stimulus which produces one of the three periods needs only to be repeated in order to do away with that condition. From this the above diagram of hypnotic conditions is evolved.

Furthermore, Dumont-Pallier should be considered as the founder of a series of experiments, for he was the first one to show in a decisive manner that the duality of the cerebral system was proved by these hypnotic phenomena; and his works, as well as those of Messrs. Bérillon and Descourtis, have brought to light the following facts: under hypnotic conditions, the psychical

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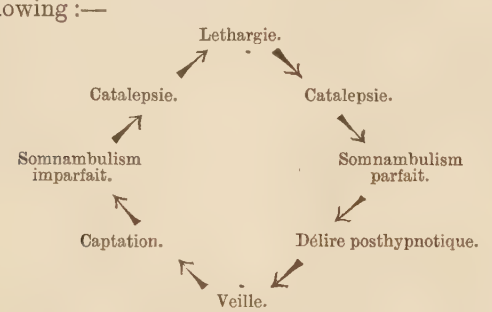
activity of a brain-hemisphere may be suppressed without nullifying the intellectual activity or consciousness; both hemispheres may be started at the same time in different degrees of activity; and also, when the grade is the same, they may be independently the seat of psychical manifestations which are in their natures entirely different. In close connection with this and with the whole doctrine of hemi-hypnotism, which is founded upon these facts, stands the phenomena of thought-transference, which we must consider later.

As an addition to the investigations of Charcot and Dumont-Pallier, Dr. Brémaud, in 1884, made the discovery that there was a fourth hypnotic state, "fascination," which preceded the three others, and manifested itself by a tendency to muscular contractions, as well as through sensitiveness to hallucination and suggestion, but at the same time left to the subject a full consciousness of his surroundings, and remembrance of what had taken place. Descourtis, in addition, perceived a similar condition in the transition from hypnotic sleep to waking, which he called *délire post-hypnotique*, and, instead of using the word "fascination" to express the opening stage, he substituted "captation." According to him, the diagram would be the following:—



This whole movement, which I have tried to sketch, and whose chief peculiarity is that it considers hypnotism a nervous malady, and one that must be treated clinically and nosographically, was opposed in 1880 in two directions,—one source of opposition producing great results, while the other fell to the ground. The latter joined itself to the theory of the Mesmerists, and tried, by means of exact experiments, to measure the fluid emanating from the human body,—an undertaking which gave slight promise of any satisfactory result.

Baillif in his thesis (1878), and Chevillard in his (for spiritualists) very interesting books, tried, by means of various arguments, to uphold the fluidic explanation. Despine also thought that by its help he had been able to explain the phenomena; but it was Baréty who, in the year 1881, first turned general attention in this direction. According to him, mankind possesses a nerve-force which emanates from him in different kinds of streams. Those coming from the eyes and fingers produce insensibility to pain, while those generated by the breath cause hypnotic conditions. This nerve-force goes out into the ether, and there obeys the laws that govern light, being broken into spectra, &c.

Claude Perronnet has more lately advanced similar views, and his greatest work is now in the press. Frederick W. H. Myers and Edmund Gurney sympathize with these views, and try to unite them with the Mesmerist doctrine of personal influence, and their theory of telepathy. The third champion in England of hypnotism, Dr. Hack Tuke, on the contrary, sympathizes entirely with the Parisian school, only differing from them in that he has experimented with satisfactory results upon healthy subjects. In France this view has lately been accepted by Dr. Bottey, who recognizes the three hypnotic stages in healthy persons, but has observed other phenomena in them, and vehemently opposes the conception of hypnotism as a malady. His excellently written book is particularly commended to those who wish to experiment in the same manner as the French investigator, without using hysterical subjects.

The second counter-current that opposed itself to the French neuropathologists, and produced the most lasting impression, is expressed by the magic word "suggestion." A generation ago, Dr. Liébault, the patient investigator and skilful physician, had endeavoured to make a remedial use of suggestion in his clinic at Nancy. Charles Richet and others have since referred to it, but Professor Bernheim was the first one to demonstrate its full significance in the realm of hypnotism. According to him, suggestion—that is, the influence of any idea, whether received through the senses or in a hypersensible manner (*suggestion mentale*)—is the key to all hypnotic phenomena. He has not been able in a single case to verify the bodily phenomena of *grandehypnotisme* without finding suggestion the primary cause, and on this account denies the truth of the asserted physical causes. Bernheim says that when the intense expectance of the subject has produced a compliant condition, a peculiar capacity is developed to change the idea that has been received into an action as well as a great acuteness of acceptation, which together will produce all those phenomena that we should call by the name of "pathological sleep," since they are only separable in a gradual way from the ordinary sleep and dream conditions. Bernheim is particularly strenuous that psychology should appear in the foreground of hypnotism, and on this point has been strongly upheld by men like Professors Beaunis and Richet.

The possibility of suggestion in waking conditions, and also a long time after the sleep has passed off, as well as the remarkable capacity of subjects to change their personality, have been made the subject of careful investigation. The voluntary production of bleeding and stigmata through spiritual influence has been asserted, particularly by Messrs. Tocachon, Bourru, and Burot. The judical significance of suggestion has been discussed by Professor Liégeois and Dr. Ladame. Professor Pitres, in Bordeaux, is one of the suggestionists, though differing in many points from the Nancy school.

This whole tendency brings into prominence the psychical influence, while it denies the production of these results from purely physical phenomena, endeavouring to explain them in a different manner. These explanations carry us into two realms, the first of which has been lately opened, and at present seems to abound more in enigmas than in solutions.

Metallotherapie, which was called into existence by Dr. Burg, and further extended by Dr. Gellé, contains a special point of interest—the so-called transference in the case of hysterically or hypnotically affected persons. Transference is caused by electro-magnetism, which has this peculiarity—that in the case of specially sensitive persons it can transfer the bodily affection from left to right, and *vice versâ*. The transference of paralysis, the cures attempted on this plan, and the so-called "psychical transference," which contains special interest for graphologists, are at the present time still open questions, as well as the closely connected theory of human polarity; and the odic experiments of Dr. Chazarain are yet waiting for their confirmation. At present the problem of the connection between magnetism and

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If a little be well rubbed in for a few minutes on a Bruise or Pinch, it will prevent Blackness. Will also cure Scalds and Burns, applied directly; and Rheumatic and Gouty Pains fixed in any part.

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hypnotism is under investigation, and in such a manner that we may hope for a speedy solution.

Still stranger than these reports are the accounts of the distant operation of certain bodies; at least, they seem strange to those unacquainted with psychometry and the literature of the past century relating to this subject. Two physicians in Rochefort, Professors Bourru and Burot, in treating a hystero-epileptic person, found that gold, even when at a distance of fifteen centimetres, produced in him a feeling of unbearable heat. They continued these experiments with great care, and, after a number of trials, came to this conclusion—that in some persons certain substances, even when carefully separated from them by long distance, exercise exactly the same physiological influence as if introduced into their organism. In order to explain these phenomena, they refer to the radiating force of Baréty, an explanation neither satisfactory to themselves nor to others. Lately the distinguished Parisian physician, Dr. Luys, has confirmed by his experiments the existence of these phenomena, but he thinks the explanation referable to hyper-sensitiveness of the "*regions émotives et intellectuelles de l'encephale*," yet even he has not reached the kernel of the difficulty.

In close connection with action at a distance is the question of distant production of hypnotic sleep. For an answer to this problem, they are experimenting in both France and England; and Frederick W. H. Myers has thrown an entirely new light upon the subject by the investigations he is making upon a purely experimental basis. In Italy they have limited themselves to the study of isolated cases of hystero-hypnotism, except as the phenomena of magnetic fascination investigated by Donato have given rise to further research; but all the books I have seen upon this subject, as well as many by French authors, suffer from ignorance of the latest English discoveries.

With this I think that I have given a slight outline of the history of hypnotic investigation to the end of the year 1886. I shall attempt a criticism of this whole movement at some other time, as space is not afforded to me here; but I should like to make this statement now, that two of the characteristic indications of this period are of the gravest import—first the method ("Our work," says Richet, "is that of strictly scientific *testing, observation* and *arrangement*"); and, secondly, the result. Hypnotism has been received into the realm of scientific investigation, and with this the foundation of a true experimental psychology has been laid.

Changes in Milk Produced by Freezing.—Two samples were experimented with. One was frozen slowly, the other quickly, and afterwards partially thawed. In the former case, the ice contained the greater part of the fat and the fluid portion most of the casein, milk sugar, and salts. In the quickly frozen and partially thawed sample, the fat was equally distributed between the solid and fluid portions. The author explains this by the fat globules rising to the top when the process of freezing is gradual. They thus become embedded in the flakes of ice; while in quickly frozen samples this cannot take place, and the fat is more evenly distributed. If a dealer whose milk has been frozen pours off the clear fluid which underlies the ice, he is liable to the suspicion of adulteration on the one hand or will deliver milk above the standard on the other. Milk which has been frozen should be well thawed and shaken up, and not sold while any ice is visible.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

The Advantages of Notification of Infectious Diseases.—Measles having become fatally prevalent in Newcastle-upon-Tyne, Mr. Henry Armstrong has advised the Town Council to take steps for the tentative notification of this disease under the special act in operation in the borough. Only some half a dozen authorities have included measles in the list of diseases to be notified; but as the disease is so largely spread through the agency of elementary schools, and since there are now improved facilities for controlling such spread by the aid of the regulations under the Education Code, there may well be substantial grounds for the advice given. In Warrington measles is now being notified as a temporary measure, and the proposal with regard to Newcastle is that it should, in the first instance, be a notifiable disease for a period of five years. In giving his advice, Mr. Armstrong has set out materials for judging of the value of notification generally. In Newcastle this system came into operation under an Act passed during 1882; and since that date there have been some remarkable reductions in the fatality from certain infectious dieases. Thus, during the four years 1883 to 1886, the small-pox deaths have been 60, 12, 3, and none respectively; the typhus deaths were 24, 6, 7, and none; continued fever, 7, 3, 4, and none; and scarlet fever, 124, 156, 83, and 45. But, ignoring the fact that there has been no similar reduction in the case of enteric fever and diphtheria, we almost fear the time is premature for drawing anything like a definite conclusion from these results. Small-pox and typhus have always been, of all diseases, most amenable to immediate notification if followed at once by isolation; but even typhus reappeared in Newcastle this year. And as to scarlet fever, we know how its epidemic prevalences run in cycles, and it is to be presumed that the time for the next increase has, as yet, not come for Newcastle. In 1881, without notification, the deaths from this disease were only seven more than in 1886, but then came a steady rise to 82, 124, and 156 in the three following years. We have no wish to imply that the admirable sanitary system organized in Newcastle will be unable, with the aid of notification, to cope with the next epidemic; but we cannot regard the experiment as having been continued for a sufficiently long time to have really proved that the reductions in mortality which have taken place are due to compulsory notification.—*Lancet.*

✣ ✣ ✣

Mice as Butter Testers.—In a letter to the *Analyst* Mr. L. W. McCoy, of Princeton, N.J., U.S.A., tells a curious story, from which it would seem that the mice in his laboratory possess the valuable power of distinguishing between oleomargarine and butter, and show a very decided preference for the latter article. He states that some time ago he received for analysis a lot of butters whose genuineness was questioned. The dishes in which the butters, preparatory to analysis, were melted, were, after the fat had been roughly poured off, permitted to remain over-night on one of his working tables. The next morning he was surprised to find that ten of the twelve dishes had been licked clean by mice, while two had been left untouched. His analyses finished, it turned out that all the suspected samples were pure

butter with the exception of two, and, upon inspection, he discovered that these two were the very fats the mice refused to eat. It seemed hardly possible that this could be due to mere luck, so Mr. McCoy spread out in clock-glass a lot of butter, and in another and similar glass a lot of oleomargarine. The glasses were placed alongside each other on his table, and allowed to remain over-night. Next day he found the glass which had contained the butter polished as clean as though it had been well washed, whereas the one charged with oleomargarine was to all intents and purposes intact. The mice had merely nibbled at it. He next set out four glasses, two containing butter and two oleomargarine. The result in this case was also conclusive. The mice dined on the two butters and completely ignored the oleos. The oleo in one glass was untouched, and that in the other merely bore the footprints of a mouse. When no butter, but simply a glass of oleo was left on the table, the mice partook thereof, 'tis true, but only in small quantities. There is no doubt that a hungry mouse will eat oleo, but it seems that he will do so only on condition that there is no butter to be had. The fact is a curious one, and shows what a keen capacity for discrimination a mouse possesses. Mr. McCoy's further suggestion, that this power of discrimination should be made use of as a butter-test, the mice being kept in a cage, and the suspected fats temptingly displayed on watch-glasses on a little shelf running from one end of the cage to the other, is scarcely a practicable one, as we fear the public would hardly care to accept mice as authorities on the subject, even if they know how their bread is buttered better than do the public analysts.—*Sanitary Record.*

Why Snow Destroys Marble Statuary.—The results of the examination of snow taken from different places in Munich and its neighbourhood by Mr. Sendtner, says the *Pharmaceutical Journal* (London), would seem to indicate not only that snow has a considerable faculty for absorbing sulphurous acid from the atmosphere, but that the absorption goes on continuously for some time. Mr. Sendtner ascertained that, on one day when snow fell, sulphurous and sulphuric acids were present in it in fairly equal proportions, but on the second day almost all the sulphurous acid had been ozonized to sulphuric acid. In the vicinity of chimneys and gas-works the absorption would, of course, be greater. This great absorptive power toward sulphurous and sulphuric acids is considered of great practical interest as explaining the destructive influence of snow upon marble statuary.

Fabrics dipped in an aqueous solution of phosphate of ammonia, and dried, are not inflammable.

"Weeds," says a writer in *Social Science*, "are plants in the wrong place. They all probably have their right places and their uses somewhere in nature's economy, though these are sometimes hard to appreciate. The most of them may serve to keep some desolate spot from being entirely bare, and the decay of their repeated generations furnishes mould to the ground, and may in time make it fit to bear something better. They all, too, have elements of beauty, and these will reveal themselves to every one who diligently searches for them. Even the most forbidding are revealed under microscopic inspection as objects of rare beauty. Many of them, if they were not weeds, would be prized as choice flowers, and some of them have been such."

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EDWARDS' DESICCATED SOUPS.

In these days when the question of feeding the poor economically and satisfactorily as well, is attracting so much attention, we are of opinion that the claims of Edwards' Desiccated Soups should be more fully brought under the notice of the public. Referring to the high nutritive qualities and to the cheapness of these soups in Health on a former occasion, we said that "The Desiccated Soup consists of beef and vegetable materials, combined in suitable proportions and adapted to form a healthy dietetic article. Each pound of this product makes six quarts of nutritious soup, whereof one notable character is its agreeable taste and rich flavour. The excellence of this food has procured for it a permanent place in the Board of Trade list of stores and necessaries required to be taken by merchant vessels. The price is extremely moderate, ranging from an ounce packet for a penny to a pound tin for one shilling and threepence. Medical opinion has testified very fully to the excellence of Edwards' Desiccated Soup, and our own examination of this food, as already remarked, confirms the highly favourable official opinions expressed regarding it. A point of importance in connection with this soup consists in the fact that it may be used in the preparation of many other dishes, rissoles, sausage rolls, &c., being readily prepared by means of the soup. Another speciality of similar kind is the White, or Vegetable Soup (Edwards'), also prepared by Messrs. King & Co., which is a purely vegetarian product, and as such is likely to find favour in the eyes of that increasing class of persons who are endeavouring to limit their use of butcher meat, or who eschew flesh food altogether. This latter product makes an agreeable soup, which possesses nutritive qualities of high order, and which, we should imagine, might well be tried by those suffering from liver troubles and digestive worries at large. It is readily digestible, and by means of the added yolk of an egg its nutritive powers can be further augmented." When we reflect that one pound of these preparations makes, as above stated, *six quarts* of excellent, strong, and highly nourishing soup, at a price which can only be described as moderate to the last degree, we may realize the immense saving in the matter of money which even ordinary households may experience by the use of Edwards' manufactures.

One point in connection with cheap foods in particular should be insisted upon—namely, the fact that in dealing with such foods *the nutritive quality of the diet is the only true test of its cheapness*. Many dietaries have been arranged both for economy's sake among the middle and working classes and for charitable purposes among the poor, which, while cheap as to cost, do not present a full and satisfying amount of digestible food. The crucial point in connection with the Desiccated Soups under notice is the fact that, in themselves, the due proportions of nitrogenous and non-nitrogenous foods are skilfully combined and present us with all the requisites of a perfect diet. A notable feature also of these soups is the fact that they are specially adapted for the wants of brain-workers, to whom phosphatic compounds are of such high importance. As evidence of this adaptability for the nourishment of the nervous tissues the following analysis by Sir Charles A. Cameron, Professor of Chemistry and Hygiene, R.C.S.I., author of "Lectures on Health," &c., may be quoted:—"I have analysed

specimens of the Desiccated Soups prepared by Messrs. King & Co.," says this eminent chemist, "and with the following result: Albuminous (nitrogenous) compounds, 10·40; starch and other non-nitrogenous substances, 68·25; mineral matter, alkaline, phosphates, chlorides, &c., 11·85; fats, 1·20; water, 8·30; total, 100·00. These Soups," adds Sir C. Cameron, "possess a very agreeable flavour and odour. They contain dried celery and other pleasantly-flavoured vegetables. They blend readily and completely with water, producing thereby, and in a few minutes, nutritious and palatable soups. The Desiccated Soups may be preserved for a long time in any climate without loss of flavour. I can strongly recommend them." By way of further illustration, it may be added that a quart of Edwards' Soup, supplemented with bread, forms what in popular language may be described as "a good square meal," from which a man may derive bodily energy sufficing for the performance of ordinary labour. This is more than can be said for many other dietaries of equal simplicity, which, while satisfying the bare pangs of hunger, do not give to the body the materials on which work may be comfortably and safely performed.

It only remains to add that a sample of the Desiccated Soups sufficient to make two pints may be had for 3½d. from Messrs. F. King & Co., Limited, Waring-street, Belfast, and 3, 4, 5 & 6, Camomile-street, London, E.C., and we cordially recommend heads of families and others to give these excellent preparations a trial. A book containing over 100 cookery recipes, specially prepared for this firm, will also be forwarded, post free. These recipes deal with the various modes of utilizing the manufactures of the firm in the most economical fashion consistent with the perfection of cooking.

NERVOUS EXHAUSTION.

PULVERMACHER'S World-Famed GALVANIC BELTS for the Cure of Nervous Exhaustion and Debility, have received testimonials from three Physicians to Her Majesty the Queen, and over Forty Members of the Royal College of Physicians of London.

The distressing symptoms of NERVOUS EXHAUSTION and DEBILITY are speedily removed by means of **PULVERMACHER'S world-famed Galvanic Belts,** which are so arranged as to convey a powerful electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of waste and decay.

Dr. Vines, Fellow of the Royal College of Physicians, writes 19th September, 1885: "Having used MR. PULVERMACHER'S BELTS for many years, in the course of medical practice, I am in a position to speak of their great value as a curative agent in cases of nervous disease or functional malady where Electricity is likely to be serviceable. I am entirely convinced of their efficacy."

Dr. C. Handfield Jones, F.R.C.P., F.R.S., Physician to St. Mary's Hospital, says: "I am satisfied that MR. PULVERMACHER is an honest and earnest labourer in the field of science, and I think he deserves to meet with every encouragement from the profession and scientific men."

Dr. Golding Bird, M.D., Physician, Guy's Hospital, says: "I can hardly recommend MR. PULVERMACHER'S INVENTION too strongly to the notice of my medical brethren."

For full Price List and particulars, see New Pamphlet **"GALVANISM: Nature's Chief Restorer of Impaired Vital Energy."** Post Free from

PULVERMACHER'S GALVANIC ESTABLISHMENT,
194, Regent-street, LONDON, W.

NEW AND VALUABLE ANTISEPTICS.

Prof. Wm. Thomson, F.R.S. (Manchester) has contributed a paper to the British Association on the "Antiseptic Properties of some Fluorine Compounds." He said that some time ago he was engaged in trying to find a substance which would act as a powerful antiseptic, &c., which was not volatile, and which was not destroyed by oxidation. He tried the effects on flour-paste and on meat chopped into small pieces and mixed with water, of a very large number of chemical compounds, and found that those which had the most remarkable antiseptic properties were the compounds of fluorine, hydrofluoric acid, the acid and neutral fluorides of sodium, potassium, and ammonium, and the fluosilicates of those bases. Of these compounds, he found sodium fluosilicate to be the one which, for its powerful antiseptic and unobjectionable properties, was the one which for the general purpose of an antiseptic was perhaps the best suited. This body was not poisonous, possessed no smell, and was sparingly soluble in water. It had only a very slightly saline taste, and might be therefore employed in preserving food without communicating any taste to it. Many experiments had been made with it for surgical purposes. A saturated solution which contained 0·61 per cent. of the salt was not irritating to wounds, while it possessed greater antiseptic power for animal tissues than one part of perchloride of mercury in one thousand of water, which was a stronger solution than that which could be generally employed for surgical purposes without producing poisonous effects. It was suggested that the antiseptic under consideration might be of great value in sewage irrigation, provided it had no injurious effect on vegetation. Prof. Thomson said his own experiments showed that sodium fluosilicate did not destroy grass so rapidly as common salt. He had been told that the substance removed unpleasant smells from the hands, and a solution of it would, therefore, be useful for medical men after performing objectionable operations. Sodium fluosilicate could not be obtained in a concentrated solution. It dissolved slowly, but the small quantity thus obtained was a powerful antiseptic and deodorizer.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "The Editor of Health," 2, Paternoster-square, London, E.C. *Those intended for the Publishing Office to be sent to* Mr. A. P. Watt, The Publisher, *at the same address.*

RULES FOR CORRESPONDENTS.

Owing to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the Letter-Box Department of Health, to the following rules:—

1. All questions are answered free of charge in the columns of Health.
2. All letters must be legibly addressed to "The Editor of Health, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of Health. A stamped addressed envelope must accompany all queries to which a private reply is desired.

4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

C. PARK.—Live, for a time, on Brand's Beef Essence, taken cold in teaspoonfuls, and also in the form of soups. Pre-digest milk—which should form the sheet-anchor of your food—with Fairchild's Peptonising Powders (Burroughs, Wellcome & Co.), and take white boiled fish, few vegetables, stale bread soaked in milk, and a little chicken occasionally. Rest as much as possible, especially after meals, and clothe warmly with Ward's (of Bradford) Woollen underclothing.

MARK HARLEY.—Take a wineglass of Mariani's Wine of Coca thrice daily before or after your meals.

SOLUS.—Press out the blackheads, and then sponge the parts with Bayley's eau de Cologne or toilet vinegar. Take hot baths, and use Pears' Soap. Avoid fatty foods, and attend to your general health. What you complain of is due to imperfect skin action.

F. P. X.—The foundation of all safe house drainage is the complete separation of the house from the sewer by means of suitable traps. Why not take the opinion of such a firm as Messrs. Banner.

CHERRY.—Take Scott's Midlothian Oat Flour once daily, and eat whole-meal bread as a diet-cure for constipation, which may also be aided by your taking twenty drops Cascara Cordial once or twice daily in water, between your meals. Rest after your meals is absolutely necessary in your case.

P. M.—For flatulence, try five drops Pure Terebene (Burroughs, Wellcome & Co.'s), on a piece of sugar. Lactopeptine may be taken with your meals, and if you are wise you will avoid solid butcher-meat for a time, and take white boiled fish, milk puddings, and soups made with Brand's Beef Essence, so as to give your digestive system as much rest as possible.

LOCKSLEY HALL.—An eye lotion made by adding one grain of the sulpho-carbolate of zinc to an ounce of rose water may be used in eye inflammation. Dilute at first with an equal part of tepid water. The sulpho-carbolate of soda may be used as a gargle for sore throat, one drachm being added to four ounces of water to make the necessary mixture.

OXONIAN.—Our best advice to you is that you should purchase the pamphlet, "A Lecture to Young Men" (post free 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and study carefully what is said therein regarding rules for health, diet, and the use of tonics. By perseverance in the rules named, you will get quite well.

PURFLEET.—Substitute for your present dietary Grant's Oat Flour for breakfast and supper; for dinner, take white boiled fish, milk puddings made with Tritola (Marshalls') or Farola, and take your meat in the form of Brand's Beef Essence, and other preparations, so as to give your stomach rest. Eat stale bread (Montgomerie's Malted for preference) only, and rest after your meals. Tea and coffee should be avoided entirely for a time. Stewed fruits may be taken occasionally, and later on boiled fowl may be added to your diet list.

A. GIFFORD. — Read the pamphlet, "A Lecture to Young Men" (price 1s. 1d., post free, from Mr. Renshaw, 356, Strand, London, W.C.), for an exposition of the matter regarding which you write. The man you name is a quack who has simply frightened you.

ELLEN GREY.—The address of Mr. Wolff, the specialist for treatment of writers' cramp, &c., is 54, Welbeck-street, London, W.

G. E. T.—The apparatus you mean, we fancy, is Hobbs' Anti-Tannic Infuser. Apply at 12, Wool Exchange, London, E.C.

ENTERPRISE.—1. The address of the filter-makers is Messrs. Howie, Hurlford, Kilmarnock, N.B. (See advertisement in our pages.) 2. The substance is saccharine. An article appeared in HEALTH on this subject a few weeks ago.

OMICRON.—The Geddes' Hemlock Bark Extract should be tried by you. As an outward application for the disease you name, it is most successful. The makers' address is 249, High Holborn, London, E.C.

T. NOBLE.—If your druggist does not keep the tabloids, apply to Burroughs, Wellcome & Co., Snow-hill, London, E.C., for address of one who does.

L. TATE.—Give Benger's Food a fair trial in the case you name. It is well adapted as a nutrient in cases of difficult and painful digestion. Full directions will be found on the packets.

A. T. P.—Address Messrs. Wilson & Sons, Hygienic towel manufacturers, Manchester. If this address does not find the firm, let us know.

J. W. S.—Try the ointment recommended to "No. 999,' in HEALTH, No. 239, and after your meals take fifteen drops Fer Bravais in water. Wash the parts with Pears' Soap only, and take Bokö̈l to dinner as a suitable beverage likely to brace up your system. If not cured, write again.

WAT.—You ask what we are afraid is an impossibility. Try applying a little Pure White Vaseline to the parts. Such marks, as a rule, cannot be eradicated.

ENOTS.—Reform your food habits, and try the Cascara Cordial and diet ordered to "Cherry" in the present number. What you complain of is due probably to some digestive irregularity, which the above treatment will remove.

LONGFIELD.—1. We do not think the appliance you name will be found to possess the slightest advantage over that you have been using. 2. You did not mention for whom the hair-advice was requested. You evidently forget what you write, and cause us and yourself additional trouble in replying. If the hair-weakness is such as you describe, and if no other treatment will suffice, we say, certainly have the hair cut short. Give the lotion ordered a fair trial first of all, and brush the hair night and morning regularly with a soft brush. Write again, if the cases are not improved.

THORNHILL.—We should say the mixture you are taking must be of very crude character. Why not take Scott's Pure Cod Oil Emulsion with Hypophosphites, in which the minerals are scientifically and intimately blended for easy assimilation? The lime is believed to strengthen the system at large, to affect the bones especially, and to correct scrofulous tendencies.

FABIUS.—1. We advise you simply to neglect the occurrences you name. That they are of no importance is fully proved by the fact that your health is good. Sometimes what you name depends on an acid state of the secretions, and you might drink a little Vichy Water occasionally, by way of corrective, if such a condition exists. 2. Your towel-friction is possibly too vigorous; moderate it, and use a softer bath-towel. 3. There is no reason why you should not be perfectly fit for the duties you indicate.

PEN PUSHER.—Rest after your meals regularly, and avoid any tendency to indigestion. It is probable the flushings you complain of are due to too sudden and severe changes from a warm to a cold temperature, or *vice versâ*. Avoid such sudden changes, and, in addition, take the Fer Bravais after meals, as ordered to "J. W. S." above.

SAMPHIRE.—1. For your cough symptoms adopt the treatment advised to "J. Fritz" in number 239 HEALTH. Clothe warmly all Winter in Sanitary Woollen Underclothing, such as that made by Messrs. Ward, of Bradford. 2. As regards the second matter you name, read the pamphlet recommended to "Oxonian" in the present number, and note advice therein given. You should wear a suspensory bandage, and bathe the parts with cold water night and morning.

VISIONARY.—What you name was most likely caused by some digestive derangement. Take a good dose of Lamplough's Pyretic Saline when next affected, and be careful in diet thereafter.

RED CROSS.—There is no reason whatever why you should not try the Siegel's Syrup. It is a perfectly safe preparation, and is calculated to do much good in many cases of constipation and biliousness. If you are not relieved, write us again, and describe your symptoms.

THE ASSOCIATION FOR THE SUPPLY OF PURE VACCINE LYMPH

12, Pall Mall East, Lond., S.W.

Sole Agents for

Trade Mark. Dr. Warlomont's Calf Vaccine.

Tubes, 2s. each. Half tubes, 1s. each. Pomade in vials, 5s.

HUMAN VACCINE (from healthy children only, microscopically examined and source quoted).—Three tubes, two-thirds full, 5s. Tubes, one-third full, and Lancet Charged Points, 1s. each; Pin-points, 1s. 1d. each. Eighteen Charged Small Points, 5s.

Tubes, two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 tubes.

Pin-points uncharged, 1s. per dozen.

Vaccinations daily between the hours of 12 and 2 by the Consulting Physician, at the uniform fee of a Guinea.

Office hours, 10 to 4; Saturday, 10 to 2.

P.O.O.'s (including postage, and crossed London & Westminster Bank), with orders, payable to EDWARD DARKE, Secretary.

J. T.—1. There is not likely to be any ill effect from your ailment, so there can be no objection to your proposed step, after an interval is allowed for your recovering your tone. 2. Yours is a case which may be cured by avoidance of suppers and fluids late at night, and by taking thirty grains bromide of potash, in water, at bedtime occasionally. Cold sponging and open-air exercise will assist your cure; but we warn you that so long as you allow your mind to dwell on such topics, so long your troubles will last. Your cure must be mental as well as physical in character,

Squirm.—1. Avoid reading and writing at night especially, and use the lotion recommended to "W. G." in last week's number. Avoid "screwing up" the eyes, as you term it. 2. Publishers, as a rule, do not mention the prices of the books sent us for review. 3. Yes; what you name probably indicates that there is some acid in the tooth wash. Use Dr. Pierre's, advertised in our pages.

Very Pale.—Follow advice given to "Netta G.," in Health No. 238, regarding the hair. We do not think the cause you name has anything to do with producing baldness; but bad ventilation by inducing ill-health might indirectly affect the hair. Take fifteen drops Fer Bravais after your meals in water thrice daily, by way of toning up your system.

J. McCallum.—You must simply avoid cold by toning up your system. Take a little of Thomson's Cod Oil Cream (advertised in our pages) after meals during the cold season, and to keep the teeth and gums in order, use Dr. Pierre's Eau Dentifrice as a tooth wash, and his tooth powder daily. A medium brush (as to hardness) should be employed.

Lime Juice.—There can be no harm involved in your taking the lime-juice as you are doing, always provided you use a pure article, such as that made by the Montserrat Company advertised in our pages. The only true test of the lime-juice doing you good will be found in your own personal experience of it. We should not recommend you to use it constantly, as you seem to propose, but to alternate it or to lessen the frequency of the doses. In this way you may be able the longer and more effectively to use it.

J. Fletcher—The stoves are not unhealthy, always provided you secure free ventilation of the room. Utilize the chimney and window—the latter by Hinckes Bird's method, by raising the lower sash on a block of wood running the whole length of the window-sill.

F. C. Harvey.—If you had read the pamphlet with any degree of care, you would have seen that what you complain of is a perfectly natural thing and in no sense a disease, but rather a symptom of health. Our advice to you is to wash the affected parts with Iodoform or Blue Gum Tree Soap and tepid water night and morning, and for the rest take plenty of open-air exercise and keep your mind easy. Beware of quacks.

M. Rickitts.—Try taking fifteen drops Fer Bravais after your food in a little water thrice daily; and take plenty of open-air exercise. If not bettered, write again.

Tradesman.—Probably you are overworked, or, from some other cause, your nervous system has lost its tone. Take a teaspoonful of Syrup of the Hypophosphites (to be had at any druggist) twice daily, in a wineglass of water, after your meals.

Odos.—Dr. Evans is, we believe, the chief American dentist in Paris. We do not think the American system is superior to our own. Try Mr. Goodman, 41, Ludgate-hill, London, E.C.

Carbon.—You must give us a history of your case before we can advise you. What is the cause of your symptoms?

G. A. W.—Follow the advice given to "No. 999" in Health, No. 239.

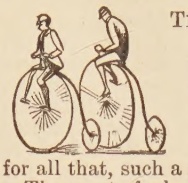
W. B.—What you name is perfectly natural, and need cause you no uneasiness. If you give the matter a thought, you will see that the circumstances you mention are such as naturally favour the result described.

T. Wilkinson.—You need not be discouraged in the least. Such cases as yours are common, and do not depend upon any past circumstances in your life. We advise you to bathe the parts with cold water night and morning, and internally to take a teaspoonful of Syrup of the Hypophosphites after your meals twice daily. Above all, keep your mind quite easy, and endeavour to be less nervous, and all will come right. Of course, we are assuming that there is no physical defect in one or other case. A Pulvermacher's Belt is often found highly serviceable, and if the foregoing treatment does not cure you, try this Belt.

Cily Fule.—Our best advice to you is to consult a sensible and competent physician in your city, who will probably be able to relieve your mind by a single word. We can send you address of such, if desired, on receipt of stamped addressed envelope. You are not specific enough in your note to us to enable us to express an opinion, but in all such cases a personal interview with a competent physician always relieves the mind. Doctors have to deal with these matters daily, so you need have no hesitation in consulting a physician.

C. P. M.—Bayley's, 17, Cockspur-street, Pall-Mall, London, W., is the correct address.

THE RECORD-BEATER.



Though the history of cycling in England extends only as far back as 1870, the strides which this sport has made are really phenomenal. Not twenty years ago the man who dared to suggest that the day would come when a cycle rider would cover 297 miles in 24 hours would have been laughed at. But, for all that, such a performance has been accomplished.

The sport of wheel-racing may be recognized as one of the firmly established institutions of this country. Every Saturday during the spring, summer, and autumn cycle races take place all over the country, and attract the greatest attention from all lovers of good sport. Most prominent amongst the famous bicycle racing-men is Richard Howell, of Leicester, the champion of the world. When passing through this city the other day, we took advantage of the occasion to call on the champion, who was then actively engaged in training for one of his big races.

Howell, who is a splendidly made fellow of between twenty-five and thirty years of age, standing six feet high in his stockings, and weighing, in training, thirteen stone, looked the picture of health, and readily responded to our suggestion as to a few minutes' talk on some of his greatest achievements. Replying to a query as to when he first began riding, Howell said:—

Richard Howell.

"In the year 1879. It was not, however, till 1881 that I first brought my name into prominence before the sporting public. At the Whitsuntide meeting, 1881, at the Belgrave Grounds, Leicester, I won the one-mile championship of the world, beating all the best men of the day, including Jack Keen and Fred Cooper, the two old champions. From that time my career, with the exception of two or three months in 1883, when I was a bit 'off colour,' has been one of unbroken successes. I have stood 'right here' during the bicycling season ready to race any man in the world who fancied he could beat me. I should like to say that all through I have ridden a 59-inch 'Rudge' bicycle, and would not change my mount under any consideration."

"Have you raced in the United States?"

"Yes, I crossed the pond in 1884, and 1885. At the great Springfield tournament in 1885 I won seven out of eight races there."

"What do you reckon your best performances?"

"Well, this year I did a full mile on the track at Coventry, the home of the cycle manufacture, in 2 minutes, 35 seconds. I was hampered by my pace-makers, and good judges think with everything in my favour I could do 2.30 for the distance, a time which I myself think I could get pretty close to."

"What is your system of training?"

"Well, I reckon I know how to take care of myself, and how to get fit. I don't believe in the old-fashioned ideas of strict diet and heavy gruelling work. I eat plain, good food, and plenty of it, and drink port wine and sound beer in moderation. In the morning I take a little walk before breakfast, and then, after that meal, if I am heavy, ride eight or nine miles on the track here, in thick flannels. After dinner I do some more slogging work, and maybe a walk in the evening, and early to bed. When I am about right in weight I content myself with short sharp bursts as hard as ever I can go, on the track, and when I can cover 440 yards in 30 seconds with a flying start I reckon to be moving as well as I want to. But there is one secret—at least, no secret—but idea of mine, the practice of which I have found invaluable. If I feel dull and out of sorts, heavy or depressed, if I have done too much work, or my system is out of order—if, in short, I don't feel quite sound, I take some medicine the same as I have used since I was queer in 1883. I have always found this set me up and put me to rights again, and it is a remedy which I believe in and tell all my friends about."

"Well, and what is it?"

"It is called Warner's Safe Cure, and it is safe to cure every time. In the winter time especially, when you can easily understand I am not so careful of my health as in the spring, summer, and autumn, I have found it invaluable. All I want, to beat the fastest bicyclist in the world is plenty of practice, an occasional dose of the medicine, and my favourite machine."—*Cycling News*, Oct. 1.

M. E. B.—Read the very full article on how to treat "Blackheads" in Health, No. 199, which may be had from the Publisher, price 2½d., post free.

Edward Marsden.—The water you send is pure enough, but requires filtration. Use one of Howie's Filters (Hurlford, Kilmarnock, N.B.), advertised in our pages, as a simple and effective appliance.

CINCTURE.—Use "Sanitas" Ointment and "Sanitas" fluid as applications. These are non-poisonous and efficient in every way for the purposes you name.

A. MACK.—The bleeding arises from the patient's biting his tongue. We advise you to be very careful regarding his diet and life at large. Avoid suppers at least within two hours of bedtime, and see that no constipation exists; if so, try a vegetarian dietary, and the use of the Cascara Cordial as above indicated to "Cherry." When the illness threatens try thirty grains bromide of potash in a wineglass of water at bedtime.

X. L.—Try Bayley's Spermaceti Soap; wash the parts regularly morning and night with this soap and tepid water. Internally, take fifteen drops of Fer Bravais after your meals, in water. The soap ordered has acted in such cases with very beneficial effect.

G. MAITLAND.—Take twenty grains bromide of potash in a wineglass of water at bedtime, and take a hot bath occasionally before retiring to rest. Take open-air exercise also, and let your food be of a light description. Eat nothing for at least an hour and a half before bedtime; and if you take supper, let it be of very light character—no meat. It is possible, of course, that mental worry may have much to do with your symptoms.

ANATOMIST.—Turner's "Anatomy" (A. & C. Black), or Wilson's "Anatomy" (Churchill), would suit you. Huxley's "Physiology" (Macmillan), or Cleland's "Physiology" (Collins & Sons), are the usual text books.

A. C.—There must be defective drainage. In such a case there is probably leakage from a drain finding its way under the adjoining floors.

BASIL.—The following hair lotion should be tried:—Quinine sulphate, twenty grains; glycerine, one fl. oz.; cologne, two fl. oz.; bay rum, two fl. oz.; rose water, eleven fl. oz. Rub the quinine with the glycerine, and add the other ingredients in order named. The addition of fluid extract of jaborandi is recommended to stimulate the growth. Keep the hair short, and wash once a week with Iodoform Soap and tepid water.

M. C. C.—Cassell's "Family Physician" is an excellent work. It may be a little expensive—as is Wood's "Household Medicine," published by Sampson Low & Co. Why not take out Cassell's "Family Physician" in its monthly parts now being issued?

ALEX. GRANT.—In the first place, wash the parts, night and morning, with Coal Tar Soap and tepid water, and apply to the parts, thereafter, an ointment made of one part iodoform, added to nine parts of benzoated lard.

J. M. B.—Lamplough's Pyretic Saline is certainly the best of the saline aperients in the market. Neither this, nor any other aperient, however, is meant to be taken continually, as you appear to suppose. Your diet must assist and render the cure permanent. See advice given to "Cherry" in the present number.

LATO.—Perchloride of mercury is a virulent poison, and should on no account be used for the purpose you name.

Order "HEALTH" from your Newsagent.

TERMS OF SUBSCRIPTION.

Yearly, including home postage, postage to the Continent, Canada, or the United States, 10s. 10d.; Six Months, 5s. 5d.; Three Months, 2s. 8½d.

Cheques and Post Office Orders to be made payable to the Publisher, A. P. WATT.

TOOTH-ACHE
CURED INSTANTLY BY
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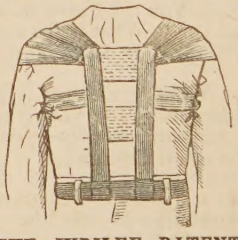

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